

R version 4.2.2 (2022-10-31 ucrt) -- "Innocent and Trusting"
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 Platform: x86_64-w64-mingw32/x64 (64-bit)

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Natural language support but running in an English locale

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Type 'demo()' for some demos, 'help()' for on-line help, or
 'help.start()' for an HTML browser interface to help.
 Type 'q()' to quit R.

[Previously saved workspace restored]

```
> Body_temperature_hearttrate = read.csv("C:/Users/yxa210024/Desktop/Masters/spring2023/Stats for
DS/mini_project5/bodytemp-hearttrate.csv ", header = T )
> Males = subset(Body_temperature_hearttrate, Body_temperature_hearttrate$gender == 1)
> Females = subset(Body_temperature_hearttrate, Body_temperature_hearttrate$gender == 2)
> boxplot(Males$body_temperature, Females$body_temperature, main = "Body
+ Temperatures Boxplots", names = c('Males', 'Females'), ylab = "Temperatures")
> par(mfrow=c(1,2))
> qqnorm(Males$body_temperature, main = 'Q-Q Plot of Body Temperature for Males')
> qqline(Males$body_temperature)
> qqnorm(Females$body_temperature, main = 'Q-Q Plot of Body Temperature for Females')
> qqline(Females$body_temperature)
> t.test(Males$body_temperature, Females$body_temperature, alternative =
+ 'two.sided', var.equal = F)
```

Welch Two Sample t-test

```
data: Males$body_temperature and Females$body_temperature
t = -2.2854, df = 127.51, p-value = 0.02394
alternative hypothesis: true difference in means is not equal to 0
95 percent confidence interval:
 -0.53964856 -0.03881298
sample estimates:
mean of x mean of y
 98.10462  98.39385
```

```
> par(mfrow=c(1,2))
> qqnorm(Males$body_temperature, main = 'QQ Plot of Body Temp_Males')
> qqline(Males$body_temperature)
> qqnorm(Females$body_temperature, main = 'QQ Plot of Body Temp_Females')
> qqline(Females$body_temperature)
> t.test(Males$body_temperature, Females$body_temperature, alternative =
+ 'two.sided', var.equal = F)
```

Welch Two Sample t-test

```
data: Males$body_temperature and Females$body_temperature
t = -2.2854, df = 127.51, p-value = 0.02394
alternative hypothesis: true difference in means is not equal to 0
95 percent confidence interval:
 -0.53964856 -0.03881298
sample estimates:
mean of x mean of y
 98.10462  98.39385
```

```
> par(mfrow=c(1,2))
> qqnorm(Males$body_temperature, main = 'QQ Plot Temp_Males')
> qqline(Males$body_temperature)
> qqnorm(Females$body_temperature, main = 'QQ Plot Temp_Females')
```

```
> qqline(Females$body_temperature)
> t.test(Males$body_temperature, Females$body_temperature, alternative =
+ 'two.sided', var.equal = F)
```

Welch Two Sample t-test

```
data: Males$body_temperature and Females$body_temperature
t = -2.2854, df = 127.51, p-value = 0.02394
alternative hypothesis: true difference in means is not equal to 0
95 percent confidence interval:
 -0.53964856 -0.03881298
sample estimates:
mean of x mean of y
 98.10462  98.39385
```

```
> boxplot(Males$heart_rate, Females$heart_rate, main = "Boxplots of Heart
+ Rates", names = c('Males', 'Females'), ylab = "Heart Rates")
> par(mfrow=c(1,2))
> qqnorm(Males$heart_rate, main = 'Q-Q Plot Rate_Males')
> qqline(Males$heart_rate)
> qqnorm(Females$heart_rate, main = 'Q-Q Plot Rate_Females')
> qqline(Females$heart_rate)
> t.test(Males$heart_rate, Females$heart_rate, alternative = 'two.sided',
+ var.equal = F)
```

Welch Two Sample t-test

```
data: Males$heart_rate and Females$heart_rate
t = -0.63191, df = 116.7, p-value = 0.5287
alternative hypothesis: true difference in means is not equal to 0
95 percent confidence interval:
 -3.243732  1.674501
sample estimates:
mean of x mean of y
 73.36923  74.15385
```

```
> par(mfrow=c(1,2))
> plot(Males$heart_rate, Males$body_temperature, pch=1, main='Scatter Plot for
+ + Males')
> abline(lm(Males$body_temperature~Males$heart_rate))
> plot(Females$heart_rate, Females$body_temperature, pch=1, main='Scatter
+ Plot for
+ + Females')
> abline(lm(Females$body_temperature~Females$heart_rate))
> plot(Females$heart_rate, Females$body_temperature, pch=1, main='Scatter
+ Plot for Females')
> abline(lm(Females$body_temperature~Females$heart_rate))
> cor(Males$body_temperature,Males$heart_rate)
[1] 0.1955894
> cor(Females$body_temperature,Females$heart_rate)
[1] 0.2869312
>
```